

## **6. Slovakia – Soil patterns**

- influenced by different natural and human factors
- distribution of soil types in our country depends on:
  - a) vertical zoning (altitude )
  - b) geological and hydrological features

*Write 3 factors influencing the existence of various soil types: .....*

### **The lowland soil types**

Topography (foothill zoning) predetermined the following soil types:

Black earth – the driest and warmest climate

*Occurrence:* Podunajská Lowland, Chvojnická Uplands, Východoslovenská Lowland, Košická Hollow Basin

Brown earth – closer to the mountains, more precipitation, lower temperatures, it originated in loess layers

*Occurrence:* .....

Luvisol – lowland margins, basins, damper and colder climate, on the loess clays

*Occurrence:* Juhoslovenská basin and other ones (Examples: .....

Fluvisol – influenced by groundwater and flooding water, it is developed near rivers

*Occurrence:* Podunajská, Východoslovenská and Záhorská Lowlands, basins and wider valleys

Mollic Fluvisol – along rivers in the Slovak lowlands, created by the humus accumulation

*Occurrence along:* .....

Solonchak – in the warmest areas with more minerals and salts from evaporating underground water, salty soils in the Podunajská and Východoslovenská plains

Gleys – it is viscous, it occurs within permanently waterlogged territories, in the areas flooded by rivers often (Východoslovenská plain, in the proximity of the Ipeľ river, etc.)

Peaty Soils – in the soaked/waterlogged areas with peat (Orava, Záhorie, Podunajská lowland)

*Homework (1 pt.): Find out the 2 most valuable peat moors in our country. Locate them on the map.*

### **The mountainous soil types**

*Why are these soils so stony?*

- more rainfall, lower temperature
- vegetation is changing due to the various soil types altering with altitude

Cambisol (brown forest soils) – in deciduous forests, up to 1000-2000 m asl., the most common soil type in Slovakia => *Why do you think cambisols are the most widespread in our country?*

Podzols – located in higher ground, up to 1800 m asl., more rainfall, evergreen forests and scrubs

Alpine Soils – the highest mountainous parts, over 1800 m asl., infertile, stony, alpine meadows and dwarf pines

Rendzinas – it includes CaCO<sub>3</sub> => calcareous soil which occurs on the carbon rocks, primarily on limestones and dolomites, stony, covered by mixed forests (Slovenský kras, Slovenký raj, Muránska planina)

*Are there any rendzinas in the ZA/PB/PU/MT district? Give 3 examples of cliffs formed by limestone and dolomite here.*

## **Soil classes**

Sandy soils – on the sandstones and quartzite (lowlands, Podtatranská basin), it originated by weathering of crystalline rocks

Clay soils – loess sediments, uplands and the Juhoslovenská Basin, andesites in volcanic mountains  
*Give 4 examples of volcanic mountains in Slovakia.*

Loamy soils – on clay rocks, it originated by sedimentation of mud in the pre-historical seas and lakes

Granularity of soils influences their fertility. (*How?*)

Sandy soils – less fertile (potatoes, rye)

Clay soils – the most fertile soils in the Slovakia (sugar beet, wheat, barley)

Loamy soils – reduced fertility but suitable for growing many crops

*Why do you think we, the people, should protect the soil cover?*

*Which human activities devalue the soil fertility? Give 3 suggestions how to protect soils.*

## **Keywords**

soil type, soil class, factor, altitude, hollow basin, relation, mountains, vegetation cover, soil fertility, map, karst, peat, spatial distribution, occurrence,